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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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ERIC L. PRAHL
HALE AND DORR LLP
60 STATE STREET
BOSTON, MA 02109

EXAMINER

SHINGLES, KRISTIE D

ART UNIT	PAPER NUMBER
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2141

DATE MAILED: 03/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/886,611

Applicant(s)

SYLOR ET AL.

Examiner

Kristie Shingles

Art Unit

2141

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16 and 17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Per Applicant's Restriction Election

Claims 1-14, 16 and 17 were elected.

Claims 15 and 18 were non-elected and will not undergo examination.

Claims 1-14, 16 and 17 are pending.

Drawings & Specification

1. The proposed drawing and specification corrections filed on 5/23/2005 have been accepted by the Examiner.

Restriction Election

2. The Office acknowledges the receipt of Applicant's restriction election, filed 11/22/2005. Applicant elects Group I, claims 1-14, 16 and 17, without traverse. Group II claims 15 and 18 are nonelected and will not undergo examination in the instant examination. Claims 1-14, 16 and 17 are examined in this instant application. This restriction is made FINAL.

Response to Arguments

3. Applicant's arguments, see Remarks pages 6-9, filed on 5/23/2005, with respect to the rejections of claims 1, 13, 16 and 17 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of *Garg et al* (US 6,327,677).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 1, 13, 16 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mayton et al* (USPN 6,763,380) in view of *Garg et al* (USPN 6,327,677).

a. **Per claims 1 and 16** (differs only by statutory class), *Mayton et al* teach a method of monitoring an element in a computer network, said method comprising:

- monitoring a preselected variable relating to said element (Col.3 Lines 15-39; monitors device performance relating to routing data);
- defining a threshold for the monitored preselected variable (Col.6 Line 66-Col.7 Line 3 and Col.10 Lines 1-32; a threshold baseline is defined);
- establishing a sliding window in time (Col.3 Lines 15-25, Col.8 Lines 1-26 and Col.11 Lines 60-67; a sliding window time period is established with scheduling variations);
- detecting when the time above threshold value exceeds a condition window value (Col.4 Lines 11-20, Col.10 Lines 11-32 and Col.12 Lines 7-14; detecting the time threshold-crossing occurs); and
- in response to detecting when the time above threshold value exceeds said condition window, generating an alarm (Col.2 Lines 35-40, Col.12 Lines 7-31 and Col.14 Lines 34-48; alarm is realized by implementing exceptions wherein an exception detection module initiates traceroutes once the threshold criteria has been exceeded).

Yet *Mayton et al* fail to explicitly teach repeatedly generating a time above threshold value, said time above threshold value being a measure of an amount of time during which the monitored variable exceeded the threshold during the sliding window of time. However, *Garg et al* teach alarms rules for a network monitoring system that measures the amount of time during which a monitored variable exceeds the threshold and generates an alarm for such a condition (col.1 line 65-col.2 line 1, col.8 lines 57-65, col.12 lines 20-62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Mayton et al* with *Garg et al* for the purpose of measuring how long a monitored value exceed the threshold, because it indicates how long the condition persisted and the severity of the problem.

b. **Per claims 13 and 17** (differs only by statutory class), *Mayton et al* teach a method of monitoring an element in a computer network, said method comprising:

- defining a profile for that element, said profile including a plurality of different alarm rules, each of said different alarm rules establishing an alarm test for a corresponding one or more variables (Col.3 Line 66-Col.4 Line 9, Col.6 Line 63-Col.7 Line 52 and Col.10 Line 58-Col.11 Line 19; stored data on the performance measurements, configuration data, and routings of each device constitute as profiles, wherein test protocols are established specifying the particular exception rules);
- detecting when the alarm test for any one or more of the plurality of different alarm rules is met (Col.6 Line 66-Col.7 Line 16, Col.8 Lines 14-65, and Col.11 Lines 6-19; exception conditions are detected based on the test protocol);
- detecting when the time above threshold value exceeds a condition window value (Col.4 Lines 11-20, Col.10 Lines 11-32 and Col.12 Lines 7-14; detecting the time threshold-crossing occurs); and
- in response to detecting when the time above threshold value exceeds said condition window, generating an alarm (Col.2 Lines 35-40, Col.12 Lines 7-31 and Col.14 Lines 34-48; alarm is realized by implementing exceptions wherein an

exception detection module initiates traceroutes once the threshold criteria has been exceeded).

Yet *Mayton et al* fail to explicitly teach repeatedly generating a time above threshold value, said time above threshold value being a measure of an amount of time during which any one or more of the alarm tests has been met during a preselected prior window of time. However, *Garg et al* teach alarms rules for a network monitoring system that measures the amount of time during which a monitored variable exceeds the threshold and generates an alarm for such a condition (col.1 line 65-col.2 line 1, col.8 lines 57-65, col.12 lines 20-62).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Mayton et al* with *Garg et al* for the purpose of measuring how long a monitored value exceed the threshold, because it indicates how long the condition persisted and the severity of the problem.

6. **Claims 2-4 and 14** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mayton et al* (USPN 6,763,380) and *Garg et al* (USPN 6,327,677) in view of *Northcott* (USPN 6,098,195).

a. **Per claim 2**, *Mayton et al* and *Garg et al* teach the method of claim 1 as applied above, yet fails to explicitly teach the method of claim 1 further comprising after generating an alarm, maintaining the alarm at least as long as the time above threshold value exceeds a clear window value. However, *Northcott* teaches generating an alarm condition when the counters exceed the threshold limit and maintaining the alarm as long as the counters are above the threshold level (Col.3 Lines 21-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Mayton et al* and *Garg et al* with *Northcott* for the purpose of asserting an alarm upon the detection of a specific event or condition and continuing in the alarm state; because it would provide an indication declaring the status of the system's operating functions—whether the exception/fault initiating the alarm has been remedied or whether the condition is still occurring.

b. **Claim 14** is substantially equivalent to claim 2, and is therefore rejected under the same basis.

c. **Per claim 3**, *Mayton et al* and *Garg et al* with *Northcott* teach the method of claim 2, *Northcott* further teaches the method of claim 2 wherein said clear window value is equal to said condition window value (Col.3 Lines 13-25; the time above threshold exceeds a clear window value, T time periods, which is also the condition window value that when exceeded, generates the alarm).

d. **Per claim 4**, *Mayton et al* and *Garg et al* with *Northcott* teach the method of claim 3, *Mayton et al* further teach the method further comprising:

- monitoring a plurality of variables relating to said element, said preselected variable being one of said plurality of variables (Col.6 Line 66-Col.7 Line 10, Col.7 Line 61-Col.8 Line 15 and Col.8 Lines 23-35; a plurality of parameters are monitored); and
- for each of the plurality of monitored variables, defining a corresponding threshold for that other variable, wherein the time above threshold value is a measure of an amount of time during which any one or more of the monitored variables exceeded its corresponding threshold during the corresponding sliding window of time (Col.6 Line 63-Col.7 Line 30, Col.9 Line 42-Col.10 Line 30, Col.10 Line 63-Col.11 Line 19 and Col.13 Line 62-Col.14 Line 48; the monitored performance variables have corresponding threshold criteria according to the data provided in the associated test protocols, thus the monitored variables all

experience the performance test measurements, including time exceeding the threshold limits).

7. **Claims 5-12** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Mayton et al* (USPN 6,763,380) and *Garg et al* (USPN 6,327,677) in view of *Chandra et al* (USPN 6,397,359).

a. **Per claim 5**, *Mayton et al* and *Garg et al* teach the method of claim 1 as applied above, yet fail to distinctly teach the method of claim 1 wherein the step of defining the threshold for the preselected variable comprises: computing an average value for the preselected variable based on values obtained for the preselected variable over a corresponding prior period; defining an excursion amount; and setting the threshold equal to a sum of the average value plus the excursion amount. However, *Chandra et al* teach implementing an auto-threshold computation, with an excursion amount equal to the product of the Stdev_count and Critical_stdev (or Stdev); wherein the auto-threshold value is equal to the sum of the mean plus the excursion amount (Col.24 Lines 58-67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Mayton et al* and *Garg et al* with *Chandra et al* for the purpose of enhancing threshold criteria to rely on an additional values instead of just one amount; because it would aid in establishing a more intricate monitoring system thereby reducing false alarms. It would also allow for the use of more precise condition indicators capable of differentiating and expanding alarm states that are based on additional values.

b. **Per claim 6**, *Mayton et al* and *Garg et al* with *Chandra et al* teach the method of claim 5, *Chandra et al* further teach the method wherein the corresponding period of time is less

than a day (Col.3 Lines 24-32, Col.8 Lines 14-26, Col.13 Lines 19-25 and Col.14 Lines 3-29; the time period for active or passive performance testing may be periodic or variable based on the schedule and the user's preference).

c. **Claim 7** is substantially similar to claim 6 and is therefore rejected under the same basis.

d. **Per claim 8**, *Chandra et al* teach the method of claim 6 wherein the step of computing the average comprises computing a mean value for the preselected variable using values obtained for that preselected variable for the same hour period of the same day of the week for a predetermined number of previous weeks (Col.24 Lines 29-57; the average can be computed using the values collected over a selected time window as an average time trend).

e. **Per claim 9**, *Chandra et al* teach the method of claim 5 wherein the step of defining an excursion amount comprises: computing a standard deviation for the preselected variable based on values obtained for the preselected variable over a predetermined period of time; and setting the excursion amount equal to K times the computed standard deviation, wherein K is a positive number (Col.24 Line 61-Col.25 Line 8; the standard deviation of the performance results is calculated and can be multiplied by Stdev_count, K, which is a user configurable value comprising positive numbers).

f. **Per claim 10**, *Chandra et al* teach the method of claim 9 wherein the step of computing the standard deviation comprises computing the standard deviation using values obtained for that preselected variable for the same hour period of the same day of the week for a predetermined number of previous weeks (Col.24 Lines 34-57; in the auto-threshold

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computation, the standard deviation can be calculated using the values for the variables on a periodic basis).

g. **Per claim 11**, *Mayton et al* and *Garg et al* teach the method of claim 1 as applied above, yet fail to distinctly teach the method of claim 1 wherein the step of defining the threshold for the preselected variable comprises: defining an excursion amount; and setting the threshold equal to H less the excursion amount, where H is a positive number. However, *Chandra et al* teach auto-threshold computations which comprise calculating a standard deviation of the results and it is well-known that the standard deviation is calculated with a plus-or-minus, +/-, factor; thus in the minus condition, the threshold would be equal to a value, H, less the excursion amount (Col.24 Line 58-Col.25 Line 19).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Mayton et al* and *Garg et al* with *Chandra et al* for the purpose of enhancing threshold criteria to rely on an additional value instead of just one amount; because it would aid in establishing a more intricate monitoring system thereby render more exact measurements by offsetting and weighing the performance results. It would also allow for the use of more precise threshold indicators capable of differentiating alarm states and determining performance trends and characteristics bases on the additional values.

h. **Claim 12** is substantially similar to claim 9 and is therefore rejected under the same basis.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: *DeLuca* (US 6,889,255), *Odhner et al* (US 6,862,623), *Sweet et al* (US 6,836,800), *Cook et al* (US 6,691,256), *Garg et al* (US 6,453,346).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie Shingles whose telephone number is 571-272-3888. The examiner can normally be reached on Monday-Friday 8:30-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kristie Shingles
Examiner
Art Unit 2141

kds


RUPAL DHARIA
SUPERVISORY PATENT EXAMINER